

## 12447200 OKANOGAN RIVER AT MALOTT, WA

LOCATION.--Lat 48°16'53", long 119°42'12", in SW¼ sec.9, T.32 N., R.25 E., Okanogan County, Hydrologic Unit 17020006, on right bank 75 ft upstream from highway bridge at Malott, 0.1 mi upstream from Loup Loup Creek, and at mile 17.0.

DRAINAGE AREA.--8,080 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1958 to current year. April 1958 to September 1965, published as "near Malott." Records published for both sites December 1965 to July 1967.

REVISED RECORDS.--WDR WA-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 783.55 ft above NGVD of 1929. April 1958 to November 1965, water-stage recorder at site 3.9 mi downstream at NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 22,000 acres in the United States and 55,000 acres in Canada. Flow regulated by Okanogan and Skaha Lakes and by natural storage in other lakes. U.S. Geological Survey satellite telemeter at station. Daily water temperature records November 1969 to June 1971. Chemical analyses 1959-62, 1963-70 (partial record station), 1972, 1975-94. Published as "near Brewster" prior to 1964 and as "near Malott" 1963-66 (station 12447300).

AVERAGE DISCHARGE.--47 years (water years 1959-2004), 3,039 ft<sup>3</sup>/s, 2,202,000 acre-ft/yr, includes records for "near Malott" site located 3.9 miles downstream, water years 1959-65. 40 years (water years 1966-2005), 3,042 ft<sup>3</sup>/s, 2,204,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,600 ft<sup>3</sup>/s, June 3, 1972, gage height, 22.16 ft; minimum observed, 288 ft<sup>3</sup>/s, Sept. 4, 1970, gage height, 2.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6,570 ft<sup>3</sup>/s, Jan. 26; maximum gage height, 9.65 ft, Jan. 26 (backwater from ice); maximum gage height unaffected by backwater, 6.97 ft, May 17; minimum discharge, 502 ft<sup>3</sup>/s, Aug. 18-20, gage height, 2.55 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,550	1,150	1,750	2,260	4,010	2,350	2,050	4,790	3,130	4,870	1,690	537
2	1,290	1,180	1,710	2,100	3,860	2,130	2,010	4,530	3,120	4,660	1,620	530
3	1,250	1,280	1,820	e1,750	3,690	1,850	2,000	4,380	2,990	4,470	1,540	536
4	1,230	1,290	1,940	e1,400	3,580	1,840	2,020	4,430	2,840	4,270	1,470	546
5	1,210	1,530	1,950	e1,240	3,560	1,830	2,000	4,670	2,730	4,010	1,380	544
6	1,170	1,530	1,950	e1,340	3,570	1,820	2,160	4,900	2,640	3,610	1,330	534
7	1,160	1,460	1,940	e1,600	3,470	1,820	2,300	5,280	2,650	3,270	1,310	523
8	1,130	1,480	1,950	e1,750	3,290	2,070	2,260	5,510	2,790	3,020	1,280	524
9	1,120	1,670	1,880	e1,930	3,230	2,210	2,290	5,440	2,850	2,890	1,180	525
10	1,050	2,220	1,880	e1,900	3,030	2,140	2,430	5,400	3,230	2,580	917	524
11	1,040	2,290	1,930	e1,850	3,010	2,350	2,450	5,640	3,240	2,500	819	538
12	1,100	2,170	1,990	e1,880	3,020	2,550	2,270	5,800	3,060	2,430	675	559
13	1,160	2,070	3,570	e1,930	3,000	2,470	1,920	5,880	2,980	2,380	618	615
14	1,280	1,960	2,990	e1,750	2,980	2,610	1,870	5,910	2,880	2,320	590	692
15	1,270	1,910	2,730	e1,360	2,940	2,510	1,850	6,040	2,700	2,270	571	733
16	1,260	1,870	2,750	e1,480	2,810	2,410	1,860	6,310	2,610	2,260	540	718
17	1,280	1,880	2,660	e1,600	2,680	2,390	1,870	6,390	2,550	2,240	521	705
18	1,320	1,950	2,550	e1,840	2,540	2,330	1,980	6,340	2,510	2,210	510	727
19	1,400	1,890	2,460	e2,500	2,520	2,360	2,120	5,870	2,630	2,230	505	721
20	1,510	1,810	2,440	e3,300	2,520	2,410	2,240	5,520	3,090	2,250	506	684
21	1,500	1,800	2,690	e4,400	2,520	2,380	2,210	5,110	3,180	2,180	562	666
22	1,460	1,740	2,900	e6,040	2,500	2,340	2,180	4,700	2,800	2,140	662	639
23	1,450	1,700	2,750	e5,460	2,440	2,280	2,400	4,440	2,600	2,110	640	620
24	1,440	1,680	2,650	e4,720	2,400	2,210	3,030	3,750	2,630	2,100	601	623
25	1,410	1,670	2,580	e5,120	2,390	2,210	3,750	3,330	2,640	2,130	575	624
26	1,360	1,650	2,530	e6,570	2,390	2,140	4,590	3,390	2,520	2,080	566	622
27	1,230	2,570	2,500	e5,720	2,370	2,170	5,120	3,540	2,510	2,010	570	614
28	1,210	2,420	2,430	e5,120	2,370	2,140	5,880	3,430	2,720	1,940	570	607
29	1,180	2,170	2,370	e4,790	---	2,120	5,910	3,390	4,140	1,870	575	592
30	1,160	1,980	2,260	e4,470	---	2,130	5,220	3,160	5,060	1,820	570	606
31	1,160	---	2,180	4,220	---	2,080	---	3,070	---	1,750	556	---
TOTAL	39,340	53,970	72,680	93,390	82,690	68,650	82,240	150,340	88,020	82,870	26,019	18,228
MEAN	1,269	1,799	2,345	3,013	2,953	2,215	2,741	4,850	2,934	2,673	839	608
MAX	1,550	2,570	3,570	6,570	4,010	2,610	5,910	6,390	5,060	4,870	1,690	733
MIN	1,040	1,150	1,710	1,240	2,370	1,820	1,850	3,070	2,510	1,750	505	523
AC-FT	78,030	107,000	144,200	185,200	164,000	136,200	163,100	298,200	174,600	164,400	51,610	36,160

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

MEAN	1,157	1,462	1,311	1,265	1,424	1,685	2,869	8,436	9,822	3,994	1,607	1,143
MAX	1,847	4,747	4,402	3,013	2,979	3,946	7,015	16,420	29,290	10,990	4,150	2,963
(WY)	(1998)	(1991)	(1996)	(2005)	(1991)	(1983)	(1996)	(1972)	(1972)	(1972)	(1993)	(1997)
MIN	605	574	565	540	569	601	928	4,319	2,625	938	390	372
(WY)	(1988)	(1988)	(1971)	(1988)	(2001)	(1988)	(2001)	(1977)	(1992)	(1977)	(2003)	(1988)

## OKANOGAN RIVER BASIN

12447200 OKANOGAN RIVER AT MALOTT, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1966 - 2005	
ANNUAL TOTAL	921,541		858,437		3,042	
ANNUAL MEAN	2,518		2,352		6,312	1972
HIGHEST ANNUAL MEAN					1,334	2001
LOWEST ANNUAL MEAN					45,300	Jun 3, 1972
HIGHEST DAILY MEAN	9,990	May 24	6,570	Jan 26	288	Sep 4, 1970
LOWEST DAILY MEAN	480	Jan 6	505	Aug 19	296	Aug 30, 1970
ANNUAL SEVEN-DAY MINIMUM	560	Jan 4	530	Sep 5	2,204,000	
ANNUAL RUNOFF (AC-FT)	1,828,000		1,703,000		7,820	
10 PERCENT EXCEEDS	6,530		4,490		1,500	
50 PERCENT EXCEEDS	1,540		2,170		690	
90 PERCENT EXCEEDS	799		623			

e Estimated

WATER-QUALITY RECORDS

WATER TEMPERATURE: Mar. 29 to Sept. 30, 2005.

REMARKS.--Records excellent.

WATER TEMPERATURE: Maximum 26.9°C, Aug. 7, 8; minimum, 7.4°C, Mar. 30, 31, Apr 2.

[illegible]

## OKANOGAN RIVER BASIN

12447200 OKANOGAN RIVER AT MALOTT, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	9.5	7.7	8.5	---	---	---
2	---	---	---	---	---	---	8.9	7.4	8.4	---	---	---
3	---	---	---	---	---	---	8.7	8.4	8.4	---	---	---
4	---	---	---	---	---	---	10.2	8.0	9.0	---	---	---
5	---	---	---	---	---	---	9.4	8.6	8.9	---	---	---
6	---	---	---	---	---	---	10.9	8.8	9.7	---	---	---
7	---	---	---	---	---	---	11.1	10.0	10.6	---	---	---
8	---	---	---	---	---	---	11.8	9.8	10.8	---	---	---
9	---	---	---	---	---	---	11.8	10.0	10.9	---	---	---
10	---	---	---	---	---	---	11.5	10.3	11.1	---	---	---
11	---	---	---	---	---	---	12.0	10.8	11.3	---	---	---
12	---	---	---	---	---	---	11.2	10.3	10.7	---	---	---
13	---	---	---	---	---	---	11.2	9.2	10.3	---	---	---
14	---	---	---	---	---	---	12.2	9.8	10.9	---	---	---
15	---	---	---	---	---	---	---	9.8	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	8.6	---	---	---	---	---	---	---	---
30	---	---	---	8.8	7.4	8.1	---	---	---	---	---	---
31	---	---	---	8.3	7.4	7.8	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	21.4	19.8	20.6	25.5	24.1	24.8	---	---	---
2	18.4	---	---	21.4	20.1	20.9	24.4	22.7	23.5	---	---	---
3	19.4	17.5	18.3	21.4	19.9	20.7	24.1	21.7	22.8	---	---	---
4	18.9	17.6	18.2	21.7	20.1	20.9	24.8	21.4	23.0	---	---	---
5	17.6	16.2	17.0	21.5	20.4	21.1	25.5	22.4	23.9	---	---	---
6	17.8	15.4	16.5	22.0	20.9	21.4	26.2	23.0	24.5	---	---	---
7	17.2	16.2	16.6	22.0	20.9	21.4	26.9	23.9	25.2	---	---	---
8	16.7	15.9	16.3	21.6	20.1	20.7	26.9	24.1	25.3	---	---	---
9	18.1	15.9	16.8	20.7	19.3	20.0	26.5	23.7	25.0	20.1	18.4	19.2
10	18.4	16.7	17.6	20.6	19.6	20.0	26.3	23.2	24.7	18.9	16.8	18.0
11	18.6	16.8	17.8	21.2	19.3	20.1	25.6	22.9	24.3	18.2	17.2	17.7
12	19.4	17.5	18.4	22.2	19.8	20.8	24.7	22.7	23.5	18.3	17.0	17.6
13	19.1	17.8	18.4	22.5	20.7	21.5	24.9	21.5	23.1	18.9	16.2	17.6
14	18.6	17.3	17.8	23.7	21.0	22.3	25.1	21.5	23.3	19.4	16.7	18.1
15	18.8	16.5	17.6	22.9	21.7	22.3	25.1	22.4	23.8	19.1	17.0	18.2
16	18.3	17.0	17.7	22.0	20.7	21.4	25.5	22.4	23.9	18.8	16.8	17.9
17	18.3	17.3	17.9	22.9	20.4	21.5	24.4	22.9	23.5	19.3	17.0	18.1
18	18.4	16.7	17.5	24.1	21.7	22.7	---	20.9	---	18.9	16.7	17.9
19	19.6	17.0	18.2	24.6	22.2	23.3	---	---	---	19.6	17.2	18.2
20	19.9	17.6	18.7	25.1	22.7	23.8	---	---	---	18.8	16.7	17.8
21	20.7	18.3	19.5	25.6	23.2	24.3	---	---	---	18.1	15.9	17.0
22	20.7	19.9	20.5	24.8	23.0	24.0	---	---	---	17.3	15.3	16.1
23	22.0	19.6	20.7	24.9	21.9	23.2	---	---	---	15.7	14.0	15.0
24	21.7	20.6	21.1	23.8	22.2	22.9	---	---	---	15.3	13.2	14.4
25	21.5	19.9	20.8	23.7	21.7	22.6	---	---	---	15.9	13.4	14.6
26	22.4	20.7	21.3	24.2	21.7	22.8	---	---	---	16.1	13.9	15.0
27	21.2	19.6	20.3	25.1	22.2	23.6	---	---	---	16.1	14.2	15.2
28	20.7	19.4	20.0	26.0	23.0	24.4	---	---	---	15.6	13.6	14.7
29	21.2	19.3	20.3	26.3	23.9	25.1	---	---	---	16.7	14.9	15.7
30	21.4	19.8	20.5	26.7	23.9	25.1	---	---	---	16.5	15.7	16.1
31	---	---	---	26.5	24.2	25.3	---	---	---	---	---	---
MONTH	---	---	---	26.7	19.3	22.3	---	---	---	---	---	---